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10/661,705	09/12/2003	Steve Klotz	15436.252.6.1	8237
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Workman Nydegger 1000 Eagle Gate Tower 60 East South Temple Salt Lake City, UT 84111			EXAMINER DIVECHA, KAMAL B	
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/661,705	<b>Applicant(s)</b> KLOTZ ET AL.	
	<b>Examiner</b> KAMAL B. DIVECHA	<b>Art Unit</b> 2451	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 12 September 2003.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12 September 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>20040130, 20071009, 20080715, 20081028</u> . | 6) <input type="checkbox"/> Other: _____  |



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**DETAILED ACTION**

This Action is in response to application filed 9/12/03.

Claims 1-20 are pending and presented for examination.

**Information Disclosure Statement**

The information disclosure statement (IDS) submitted on 1/30/04, 10/09/07, 07/15/08 and 10/28/08 is in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement is being considered by the examiner.

**Priority**

The present application is a non-provisional of provisional application no. 60411057 filed 9/16/2002.

**Oath/Declaration**

The receipt of Oath/Declaration is acknowledged.

**Claim Objections**

Claims 1-20 are objected to because of the following informalities:

Claim 1 recites “the protocol”. There is insufficient antecedent basis for this limitation in the claim. It appears that applicant intended to recite “the protocols in conversation”.

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Claim 2 recites “the data trace” and “the topology”. There is insufficient antecedent basis for this limitation in the claim. It appears that applicant intended to recite “the at least one bidirectional data trace” and “the network topology”.

Claim 3 recites “the data trace duration”. There is insufficient antecedent basis for this limitation in the claim. It appears that applicant intended to recite “data trace duration”.

Claim 4 recites “the flow”.

Claim 9 recites “...to capture bidirectional conversations” and then “...from at least one data trace captured...” and “captured be...”, etc.

Appropriate correction is required.

Please note that the listing above is not intended to be exhaustive and is provided as exemplary. Applicant is advised to review and correct all the potential antecedent errors and grammatical errors in the response to this office action.

### **Double Patenting**

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the “right to exclude” granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned

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with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

1. Claims 1, 5, 8-9, 13, 14, 16 and 18 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-22 of U.S. Patent No. 7,441,154 B2.

Although the conflicting claims are not identical, they are not patentably distinct from each other because the claims in the co-pending application contains each and every element of claims in the present application, and as such anticipates the claims above.

**For example:**

Claim #	Present application	Claim #	Co-pending application
1	A method for analyzing a network, comprising: capturing at least one bidirectional data trace from the network; determining a network topology; analyzing protocols in conversations between initiators and targets to determine if the protocols are valid using the determined network topology and known protocol standards; and displaying at least one of errors or warnings determined in the protocol and metrics calculated from the analysis of the protocols to a user.	1	A method for determining errors and metrics in a computer network, comprising: positioning an analyzer in communication with the network; capturing a data trace of the network with the analyzer; determining a network device topology from a first processing of the data trace; building user layer protocols using a second processing of the data trace and the determined device topology; determining errors in the network device topology using protocol experts (analogous to protocol standards) applied to the user layer protocols in conjunction with the determined device topology; and displaying at least one of the device topology and the determined errors to a user, wherein determining errors further comprises filtering the data trace to eliminate data that is not accurately represented as a result of analyzer position.
5	The method of claim 1, wherein analyzing	6	The method of claim 1, wherein determining errors further comprises

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	further comprises filtering invalid data from the data trace prior to analysis.		determining at least one performance metric related to the determined topology and the specific user layer protocol.
9	<p>A method for conducting an expert analysis process on a network, comprising:</p> <p>positioning at least one analyzer in communication with the network, the at least one analyzer being positioned to capture bidirectional conversations between each device on the network;</p> <p>determining a network topology from at least one data trace captured by the analyzers;</p> <p>analyzing the data trace to determine if conversation protocol between devices was followed;</p> <p>calculating at least one user selected network metric; and</p> <p>displaying determined network errors and calculated metrics to the user via a graphical user interface.</p>		

Please note the listing above is not intended to be exhaustive and is provided as exemplary.

**Claim Rejections - 35 USC § 102**

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-5, 7-14, 16-18 and 20 are rejected under **35 U.S.C. 102(b)** as being anticipated by Anderson et al. (hereinafter Anderson, US 5,850,388).

As per claim 1, Anderson discloses a method for analyzing a network, comprising:  
capturing at least one bidirectional data trace from the network (col. 9 L15-30: capturing frames from the network using the analyzer);

determine a network topology (col. 11 L18-28, col. 17 L1-10: determining topology information from the frame);

analyzing protocols in conversations between initiators and targets to determine if the protocols are valid using the determined network topology and known protocol standards (col. 11 L15 to col. 12 L26: analyzing frames and information in the frames based on topology such as Ethernet and known standards for the Ethernet); and

displaying at least one of errors or warnings determined in the protocol and metrics calculated from the analysis of the protocols to a user (col. 9 L15-30: user interface, col. 10 L41-65: metrics, col. 13 L5-9).

As per claim 2, Anderson discloses the method, wherein analyzing comprises:

applying protocol experts to the data trace (col. 10 L41 to col. 11 L4: applying Ethernet, FDDI, etc., protocol experts or standards, col. 19 L29-45: applying rules);



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generating metrics based upon the topology and the analyzed protocols (col. 10 L41 to col. 11 L4); and

generating and storing device state snapshots (col. 10 L41 to col. 11 L4: generating and storing device statistics).

As per claim 3, Anderson discloses the method wherein generating snapshots comprises generating snapshots for each device on the network at a plurality of predetermined equal intervals across the data trace duration (col. 10 L9-11; session, col. 13 L27-36).

As per claim 4, Anderson discloses the method wherein the errors, warnings and metrics describe the flow of data in the data trace (col. 10 L41 to col. 11 L4).

As per claim 5, Anderson discloses the method wherein analyzing further comprises filtering invalid data from the data trace prior to analysis (col. 10 L20-40).

As per claim 7, Anderson discloses the method wherein analyzing protocols further comprises determining if nested protocols are present and analyzing each of the nested protocols with a protocol specific expert if nested protocols are determined (col. 16 L64 to col. 17 L57).

As per claim 8, Anderson discloses the method wherein analyzing **comprises at least one of** determining if conversations rules were complied with (col. 10 L41 to col. 12 L26), determining if the conversation format was within a predetermined standard for the conversation protocol, determining if a conversation payload was accurately received, and determining if the conversation workload was completed in a reasonable duration.

As per claim 9, Anderson discloses a method for conducting an expert analysis process on a network, comprising:

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positioning at least one analyzer in communication with the network, the at least one analyzer being positioned to capture bidirectional conversations between each device on the network (col. 9 L15-30: capturing frames from the network using the analyzer, fig. 3 item #304);

determine a network topology from at least one data trace captured by the analyzers (col. 11 L18-28, col. 17 L1-10: determining topology information from the frame);

analyzing the data trace to determine if conversation protocol between devices was followed (col. 11 L15 to col. 12 L26: analyzing frames and information in the frames based on topology such as Ethernet and known standards for the Ethernet);

calculating at least one user selected network metric (col. 13 L5-12, col. 22 L50-61); and

displaying determined network errors and calculated metrics to the user via graphical user interface (col. 9 L15-30: user interface, col. 10 L41-65: metrics, col. 13 L5-9).

As per claim 10, Anderson discloses the method wherein determining network topology comprises extrapolating (i.e. calculating, filtering and/or processing data trace) network device presence indicators from left and right channel data from the data trace and determining the network topology from the network device indicators (col. 10 L40-65: Statistics for each station on a network is calculated and stored in the station list array, i.e. topology including stations in the network).

As per claim 12, Anderson discloses the method wherein analyzing the data trace further comprises determining valid data from the data for analysis (col. 10 L20-40: by filtering the invalid data).

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As per claim 17, Anderson discloses the method wherein applying the plurality of experts comprises rebuilding user layer protocols for each frame in the trace data (col. 11 L5 to col. 12 L21, col. 17 L1-57, col. 19 L1-9).

As per claim 18, Anderson discloses the method wherein rebuilding comprises stripping a specific protocol layer from the frame, sending the specific protocol layer to a software expert configured to analyze the specific protocol layer and repeating the stripping and sending steps until each of the frame has been analyzed by a software expert (col. 11 L5 to col. 12 L21, col. 17 L1-57, col. 19 L1-9).

As per claim 20, Anderson discloses the method wherein determining the network topology comprises parsing through the data trace looking for indicators of the presence of valid devices on the network and storing a topology representative of the devices found (col. 10 L41 to col. 11 L4).

As per claims 11, 13-14 and 16, they do not teach or further define over the limitations in claims 1-5, 7-10, 12, 17-18 and 20. Therefore, claims 11, 13-14 and 16 are rejected for the same reasons as set forth in claims 1-5, 7-10, 12, 17-18 and 20.

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**Claim Rejections - 35 USC § 103**

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

3. Claims 6, 15 and 19 are rejected under **35 U.S.C. 103(a)** as being unpatentable over Anderson et al. (hereinafter Anderson, US 5,850,388) in view of Mastro et al. (hereinafter Mastro, US 6,915,466 B2).

As per claim 6, Anderson discloses the method of claim 5 as set forth above.

However, Anderson does not disclose the process of filtering the data trace for open commands that are not perceived by at least one analyzer positioned in communication with the network and eliminating devices associated with these open commands not received by the analyzer from further analysis, filter the data trace for failed open commands and eliminating devices associated with the failed open commands from further analysis, filtering the trace data for frames to destinations that are not received by the analyzer and eliminating devices associated with these frames from further analysis, and filtering frames transmitted when a loop is in closed state and eliminating devices associated with transmitting frames when a loop is closed from further analysis.

Mastro discloses the process of filtering the data trace for various commands, for frames, and when a loop is in closed state and eliminating the devices (fig. 16 item #410: capture specific commands, throw specific cmds, etc., item #405: address filter for source and destination devices, col. 14 L34 to col. 15 L12).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify Anderson in view of Mastro in order to filter various data trace and eliminate the devices associated with the filtered data trace.

One of ordinary skill in the art would have been motivated because it would have provided a mechanism for filtering invalid data for analysis.

As per claim 19, Anderson discloses the method of claim 18 as set forth above.

However, Anderson does not disclose the process wherein the network is an FC network.

Mastro discloses the network analyzer, wherein the network is an FC network (col. 3 L20-25).

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Therefore, it would have been obvious to a person of ordinary skilled in the art at the time the invention was made to modify Anderson in view of Mastro in order to analyze the data in a FC network.

One of ordinary skilled in the art would have been motivated because it would have provided a mechanism for analyzing the data in a Fibre Channel network (Mastro: col. 3 L20-25).

As per claim 15, it does not teach or further define over the limitations in claim 6. Therefore, claim 15 is rejected for the same reasons as set forth in claim 6.

#### **Additional References**

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- a. Cookmeyer, II et al., US 6,363,384 B1: Expert System Process Flow.
- b. Ivory, US 6,757,727 B1: Top-Down Network Analysis system.
- c. Wall et al., US 6,507,923 B1: Integrated Multi-Channel Fiber Channel Analyzer.
- d. Leong et al., US 6,728,219 B1: Graphical User Interface system and method for visually gauging network performance.
- e. Ferguson et al., US 6,639,607 B1: GUI for a logic analyzer which allows trigger construction for data communications packets and protocols.

**Conclusion**

The teachings of the prior art should not be restricted and/or limited to the citations by columns and line numbers, as specified in the rejection. Although the specified citations are representative of the teachings of the art and are applied to specific limitations within the individual claim, other passages and figures may apply as well. It is respectfully requested from the applicant in preparing responses, to fully consider the references in its entirety as potentially teaching all or part of the claimed invention, as well as the context of the passage as taught by the prior art or disclosed by the examiner.

In the case of amendments, Applicant is respectfully requested to indicate the portion(s) of the specification which dictate(s) the structure relied on for proper interpretation and support, for ascertaining the metes and bounds of the claimed invention.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to KAMAL B. DIVECHA whose telephone number is (571)272-5863. The examiner can normally be reached on IFP (M-F: 10-6.30).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, JOHN FOLLANSBEE can be reached on 571-272-3964. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/KAMAL B DIVECHA/  
Examiner, Art Unit 2451